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HYDRO POWER AND ENERGY PLANNING PROJECT (HPEP)

HPEP vigorously continued successful implementation of Georgia's Electricity Market Model (GEMM 2015) through active cooperation with the Ministry of Energy (MoE) and other energy stakeholders. Effortful work of the USAID HPEP has been clearly reflected in a number of positive steps of the Government of Georgia taken towards the introduction of free, competitive electricity market in the country.

Newsletter

November / December, 2013

HPEP SUPPORTS:

- Accomplishment of tasks outlined in the GEMM 2015
- Financing of the new, run-of-river, HPPs by means of non-recourse loans
- Cross-border, competitive trading of clean energy



Above: USAID HPEP's Steering Committee Meeting in MoE

OPENING OF THE NEW 400 KV TRANSMISSION LINE TO TURKEY

On December 11 the MoE declared opening of the new 400 kV transmission line to Turkey and back to back substation Akhaltsikhe (500/400/220 KV). USAID HIPP as well as HPEP contributed to ensuring of the proper operation of the line by: drafting the Cross Border Electricity Trading Agreement which was signed in 2012, reviewing and commenting on the Interconnection Operations Agreement for GSE, and developing capacity allocation and congestion management rules for cross border trading through this new line.

AMENDMENTS TO THE LAW OF GEORGIA ON "ELECTRICITY AND NATURAL GAS"

Another big success of the USAID HPEP achieved by the end of 2013 was adoption of the amendments to the Law of Georgia on Electricity and Natural Gas (the "E&G Law") by the Parliament of Georgia. Draft amendments to the E & G Law were completed by the MoE with support of HPEP experts. The draft E & G Law contains all provisions discussed during the meetings at Ministry of Energy (MoE) where HPEP actively participated together with other stakeholders. The Draft E & G Law was distributed in late November to government bodies for comments. It was approved by the cabinet of Ministers and then sent to the Parliament by the Government of Georgia. Adoption of the amendments by the parliament of Georgia is expected by end of this year. The issues covered by the Draft E & G Law are very important for providing competitive market for electricity trading:

- Transit Regulation falls within the scope of the E&G Law;

- The definition of Grid Code is added to the E&G Law. Grid Code is defined as a normative act combining transmission grid code and distribution grid code;
- Transit of electricity through the territory of Georgia and issues connected with transit will be regulated only by the provisions of the E&G Law directly addressing transit;
- Regulation for New Power Transmission Line. The Law states that the rules and procedures for holding an auction concerning the available transfer capacity of the New Power Transmission Line designated for Cross Border Transit (Flow) will be regulated by the Market Rules;
- In the draft E&G Law, the term Electricity System Commercial Operator (ESCO) is replaced by the Market Operator (MO). Therefore each article mentioning ESCO is amended;
- GNERC is given a power to monitor energy markets, the relevant amendment is made to the article listing GNERC authorities;

- GNERC will possess the authority to approve Grid Code;
- Grid Code combines procedures, rules principles and standards for management and utilization of transmission and distribution networks and regulates the relations among licensees and network users;
- New Article on Uniform System of Accounting (USoA) is introduced in the E&G Law;
- New paragraphs are introduced to the E&G Law describing provision of transmission service and dispatch service;
- A new article concerning the calculation of electricity factual losses in electricity transmission network was added to the E&G Law;
- Before September 1, 2015 relevant amendments have to be made to legislative and/or normative acts which will ensure the transformation of Georgian electricity market into the daily trading model proposed and advocated by USAID.

Amendments to the E&G Law proposed by USAID:

- Introduction of Market Operator
- Introduction of Grid Code
- Strengthening GNERC
- Introduction of Uniform System of Accounting
- Amendments ensuring transformation of the Georgian Electricity Market into a hourly trading model.
- Providing regulation of holding auctions on available transfer capacity of the new Power Transmission Line designated for Cross Border Transit (Flow) by the Market Rules

OTHER EFFORTS TOWARDS HARMONIZATION WITH TURKISH AND OTHER EUROPEAN MARKETS

To further harmonize Georgian electricity market with Turkish and other European markets USAID HPEP developed Electricity Supply Agreement (ESA), a template agreement for the sale of electricity from Georgian generating plants to electricity off-takers in Turkey. During working sessions organized by GNERC, the ESA was updated based on comments from representatives from GNERC, ESCO, MoE and GSE.

The final draft of the ESA will be reviewed and harmonized with the Turkish electricity regulator, EMRA, in the next few months. The first topic of consideration by recently established cross border working group between GNERC and EMRA will be ESA harmonization.

HPEP also created a template contract between the TSO (GSE Dispatch) and the transmission companies (GSE transmission, Energotrans, SakRusEnergo, and EnergoPro). The template contract covers planning, investment and operation coordination.



Above: Discussions of ESA with GNERC, ESCO, MoE and GSE

HPEP's ESA Template provides:

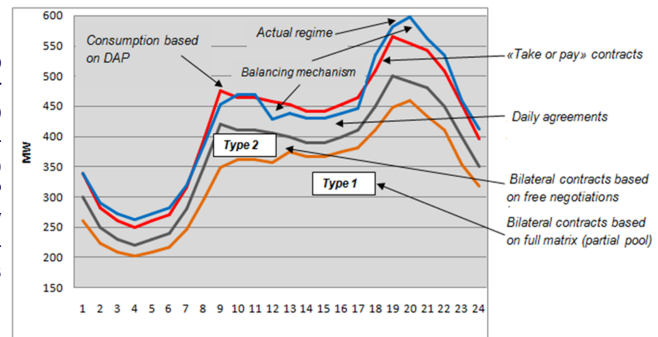
- Consistency with laws of each country;
- Approved by the Regulators of each country;
- Ten year (or more) term validity necessary for HPP investor financing;
- Agreed monthly volume and capacity of electricity to be delivered and received under the ESA;
- Parties can adjust monthly volumes up or down by ten percent;
- Possibility of day-ahead and intra-day scheduling;
- Based on 2007 EFET General Agreement adopted now in Turkey.

DAY AHEAD PLANNING (DAP) AND HOURLY BALANCING (HB) OF ELECTRICITY TRADING

Transition of ESCO into Market Operator requires significant capacity building in understanding of competitive market operations and transition of the Georgian electricity sector into an hourly trade with new balancing & settlement systems. In this regard, the HPEP has provided ESCO with workshops on Transition to Hourly Based Electricity Market in Georgia and New Bilateral Contract Approach.

To introduce an hourly electricity balancing market, every market participant should have capabilities to forecast their generation/consumption day ahead, for each hour. HPEP has developed a work plan for ESCO to implement the hourly balancing. As a first step forward to the hourly balancing, HPEP has proposed to implement a Day Ahead Planning (DAP) process. DAP will be the precursor to Balancing Market and Day Ahead Power Exchange. Implementation of DAP requires every market member to forecast their next day's generation and/or consumption by hours.

HPEP created an Excel-based forecasting model, based on Month Ahead (MAP) and Day Ahead Planning (DAP) concept, which will assist market participants to improve their forecasting skills and schedule more accurately their next day generation/consumption levels. The model uses historical hourly load data for typical days from GSE's Alpha Center for estimating daily load curves. HPEP model is under rigorous testing in ESCO using market players' historical data. When testing is completed; the model will be ready to be introduced to market participants. The concept of DAP was accepted by ESCO as well as GSE, both adopting respective work plans to implement the Day Ahead Planning by spring 2014. HPEP and GSE has agreed to hold joint meeting in January, 2014 with all market members to introduce DAP concept and start simulations using HPEP's DAP model. Also as mentioned already above, HPEP has developed amendments to the existing Market Rules which will make DAP a requirement for all market participants. The proposed DAP changes in the Market Rules are expected to be effective in the beginning of 2014.



Above: Snapshot from HPEP's presentation on DAP and HB made to ESCO

STRENGTHENING GNERC



Above: Discussions of GNERC's new organizational design

Apart from USAID HPEP's recommendations to implement the Uniform System of Accounts (regulatory accounting) for the electricity sector, Georgia Energy and Water Supply Regulatory Commission (GNERC) also accepted the concept of electricity market monitoring and now the Commission is working with HPEP in developing rules related to GNERC's monitoring activities including roles and responsibilities of the electricity sector in regularly reporting information on market activity.

The new GNERC Chairperson (Irina Milorava) was appointed in September 2013. As one of her first priorities, HPEP was asked to help the new Chairperson re-organize its staff by January 1, 2014.

HPEP developed a new organizational design for GNERC, developed detailed departmental and division level activity descriptions and created 95 GNERC staff job descriptions. This effort will help GNERC to completely transform its focus

from mainly organizing dispute resolutions between retail consumers and licensees to setting tariffs, adopting market regulations and monitoring energy markets.

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